REMARKS

This amendment is in response to the Office Action mailed on May 27, 2010. Claims 1-58 were pending. By this amendment, Claims 1, 10, 12, 17-18, 20, 22, 24-25, 32, 37, 46, and 53-55 are amended. By this amendment, Claims 2-9, 19, 21, 23, 26-31, 47-50, 52, and 56-58 are cancelled. By this amendment, Claims 59-74 are newly presented. No new matter is added. Reconsideration and withdrawal of the rejections are respectfully requested in view of the following remarks.

It is noted that all differences between the cited reference(s) and each claim may not necessarily be recited herein. This is not an admission on the part of the Applicant that Applicant concurs with the Examiner's assertions regarding the patentability of said claims over the cited reference(s). Applicant, in some cases, may simply choose to highlight particular differences between the claims and the reference(s). Such differences may render any differences not explicitly addressed moot.

1. Examiner applied art

The present Office Action applied the following alleged prior art:
US Patent No. 6,330,214 to Ohta, et. al (hereinafter **Ohta**),
US Patent No. 7,286,601 to Kitamura (hereinafter **Kitamura**),
US Patent No. 6,894,931 to Osakabe (hereinafter **Osakabe**), and pending
US Patent Publication No. 2002/0169996 to King et. al (hereinafter **King**). Ohta, Kitamura, and Osakabe collectively may hereinafter be referred to as Examiner Applied Art.

Ohta discloses a system allowing an integrated buffer memory for recording to media and reproducing from media. See Abstract. In Ohta, the term "recording" references writing to the media, and "reproduction" references reading from the media. See, for example, Figure 12 and related text.

Kitamura discloses a system of simultaneously receiving both a low-quality stream and a high-quality stream of the same content, and switching reproduction from the high-quality stream to the low-quality stream when a transmission path failure occurs. See Abstract.

Osakabe discloses incorporating disc-specific recording speed information by overloading the use of the Absolute Time In Pre-groove (ATIP) information stored in some optical media, to prevent a drive from writing to media beyond the limits of the particular disc. See Abstract.

King discloses, for a non-redundant RAID array ***of hard drives*** (disks), to use a Write Recovery Table (WRT) to cause special handling of write commands for LBAs (logical block address) in the table. For such LBAs, writes will use WRITE AND VERIFY command instead of WRITE commands, to ensure failure to write is detected at the time of the write. Upon failure of the WRITE AND VERIFY, a REASSIGN BLOCKS command is issued to instruct the hard drive to reassign the LBA(s) to a new location on the media. If WRITE AND VERIFY is not supported, a READ command with the Force Unit Access (FUA) bit set to one may be used to verify the written data.

2. Example support for amendments

As a convenience to the Examiner, Applicant hereby provides examples of support for the amendments presented. These examples may not be exhaustive, either as to the amendments nor to the support for the amendments.

The amendments to the specification may be supported by originally filed Claims 1-58.

Amendments to Claims 1, 10, 17-18, and 20 may be supported by at least pages 2, 5, 8-13, and 17 and FIG. 1 of the application.

Amendments to Claims 37 may be supported by at least pages 21, which shows that every ordered pair (e.g., sections {1,2} and {2,1}) are tested.

3. Response to Applicant's Remarks

Applicant thanks the Examiner for providing the time to provide a response to Applicant's remarks. The response was helpful in understanding some areas in which the Examiner was considering terms broadly. Applicant also thanks the Examiner for providing specific wording that Examiner found was not recited in the claims, suggesting an understanding of the intended meaning of claims. Applicant has reviewed each of these statements. Although Applicant may not agree with each of the responses provided in the Office Action, Applicant believes this section was beneficial to moving prosecution on the merits forward.

4. Objection to unsupported factual assertions and current Official Notice

The Non-Final Office Action dated November 13, 2009 made various factual assertions without supporting the assertions, and/or by taking Official Notice. Applicant's response challenged these factual assertions as not properly Officially Noticed, or alternatively not based upon common knowledge.

When an Applicant challenges a factual assertion as not properly Officially Noticed or as not properly based upon common knowledge, the examiner must support the finding with adequate evidence. See MPEP 2144.03(C).

The present Office Action asserts that Official Notice was proper as to "users in Ohta can select different starting times for playing back each of the plurality of data streams according to their convenience". Office Action pages 2-3. See also, for example, Office Action pages 2-4, 10, 11, 15, 17, and 18. The Office Action seemed to base this assertion on "Ohta discloses concurrent reproduction of two different video signals, each of which is recorded as a separate file and played back to separate video systems (see column 16, lines 25-33)." *Id.* Therefore, the Office Action suggests, the following was common knowledge at the time the application was filed: "reading data for each of two the video signals from the optical discs would be initiated in response to user's selection at different times". *Id.*

Applicant respectfully disagrees. The Office Action has failed to provide documentary evidence of the different starting times, which were the subject of the challenge. Even if, assuming *arguendo*, Ohta disclosed an enabled system for simultaneous reproduction of two separate video signals to two different

video systems, this assertion fails to address the concurrent nature of the multiple operations at different starting times.

Accordingly, Applicant must once again challenge these factual assertions as improper, and requests documentary evidence of the recited features of the pending claims which have been rejected solely upon the basis of either unsupported factual assertion or by this improper Official Notice.

6. Rejection of Claim 51 under 35 USC 102(b)

Claim 51 stands rejected under 35 USC 102(b) as directed to non-statutory matter. Claim 51 (as rejected) recites: (1) "*At least one computer-readable storage medium having stored thereon the following computer executable components*", (2) "*a component that provides for concurrently reading a non-real-time data stream from optical media starting at time t_y and reading a real-time data stream from the optical media starting at time t_x, wherein t_x != t_y*".

In rejecting claim 51, the Office Action asserts that a "magnetic, optical, electromagnetic, infrared, ... or propogation medium" is not patentable, ***without citing to any authority***. The Office Action then suggests this requires the addition of ***yet another term*** to the preamble of this claim, suggesting "computer readable non-transitory storage medium".

Applicant respectfully disagrees. Applicant first will presume that the Office Action was referring to *In Re Nuijten*, 500 F.3d 1346, herein after **Nuijten**. Applicant will next presume that the Office Action was referring to *Ex parte Wahlbin*, BPAI Jan. 13, 2010, hereinafter **Wahlbin**. Otherwise, the rejection was

not clear enough to allow Applicant to respond, which would require the Office to clarify the rejection to allow Applicant to respond.

Nuijten held that a **transitory, propagating signal** does not fall within 35 USC 101, indicating that a signal that **simply conveys information** is not statutory subject matter. See Nuijten, page 11, first paragraph. It further stated, "In essence, energy embodying the claimed signal is fleeting and is devoid of any semblance of permanence during transmission". Nuijten, page 16. In a footnote to that quotation, they then state, "Of course, such a signal could be stored for later use, but the result of such storage would be a 'storage medium' containing the signal". Nuijten, footnote 6.

The originally filed claim read "computer readable medium having stored thereon". Thus, the originally filed claim indicated that the computer readable medium had to be **storing** the computer executable components. As seen in footnote 6 of Nuijten, a storage medium **is not a signal**. Because a computer readable medium that stores information is not a signal under Nuijten, Claim 51 as originally presented was patentable subject matter.

However, in the interests of furthering prosecution, Applicant amended the claim to read "computer readable **storage** medium". Applicant notes that this was redundant, given the prior claim language explicitly reciting the medium was storing the computer executable component. For at least the same reason the originally filed claim was patentable, Claim 51 as previously amended to explicitly include the term "storage" is patentable subject matter in view of Nuijten.

Wahlbin is also inapplicable here. The specification (page 23, lines 15-22) gives as examples of computer storage media magnetic disks, floppy disks, flash memory cards, memory sticks, CDROMs, CD-Rs, CD-RWs and DVDs, etc., all of which are tangible media and none of which are intangible. In contrast, Wahlbin was rejected because the Applicant **explicitly redefined** the term "computer readable storage medium" to include signals. Therefore, Wahlbin is inapplicable to the present application, both because the present specification does not redefine this term and because each of the examples are of tangible storage media. Claim 51 is therefore patentable subject matter in view of the decision in Wahlbin.

Accordingly, the rejection of Claim 51 under 35 USC § 101 should be withdrawn.

7. Rejection of Independent Claim 1 under 35 USC 102(b)

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by Ohta. A rejection of a claim under 35 USC 102(b) requires the Office to show that a single piece of prior art teaches **every aspect in as complete detail** as is contained in the claim. See MPEP §§ 706.02(V) and 2131.

Independent Claim 1 recites a system that facilitates utilizing an optical medium, the system comprising at least one processor, the system configured to (1) "*provide concurrent reading of a plurality of data streams from the optical medium, the plurality of data streams comprising at least one real-time data stream*", (2) "*analyze at least one of the plurality of data streams*", (3) "*infer potential starvation of a first real-time data stream of the at least one real-time*

data stream", and (4) "*based on the inference of potential starvation, take remedial action to mitigate the inferred starvation of the first real-time data stream.*"

In the rejection of Claim 1, the Office Action asserts that Ohta discloses "a system that facilitates utilizing an optical medium, comprising: a component that provides concurrent recordation of data from the optical medium and playback from the optical medium, the playback time starting at time (t_x) and the recordation time starting at time (t_y), wherein t_x != t_y. (column 7, lines 36-38; column 16, lines 33-37." Office Action, page 6, last full paragraph. In addition, the Office Action stated that "the claim does [not?] recite a specific recordation path, that is, including the recordation destination medium that is distinguished from a playback buffer". Office Action, page 2, third paragraph.

Based on the above, it seems the Office Action was equating the concurrent reading of a plurality of data streams from the optical medium as recited in Claim 1 with the reproduction of a single signal from the optical disc as disclosed by Ohta.

Applicant respectfully disagrees. Although Applicant disagrees with the reasonableness of the breadth applied to the text of Claim 1, to further prosecution, Applicant has amended Claim 1 to clarify that a plurality of data streams are concurrently read from the optical medium to a corresponding one of a plurality of buffers. The applied section of Ohta shows only the read of a single signal. Accordingly, because the applied section of Ohta fails to show at least this feature, the rejection should be withdrawn.

To further prosecution towards allowance, Applicant has also included multiple additional features into Independent Claim 1. Applicant further submits that Ohta fails to ***disclose, teach, or suggest*** each of the features in Claim 1. None of the Examiner Applied Art, alone or in reasonable combination, cures these deficiencies of Ohta.

Accordingly, Claim 1 is patentable for at least these additional reasons.

8. Rejection of Independent Claim 25 under 35 USC 103(a)

Claim 25 stands rejected under 35 USC 103(a) as being obvious over Ohta in view of Official Notice.

Independent Claim 25 recites a method of utilizing optical media, the method comprising (1) "*starting to read a first data stream from the optical media at time t_x, the first data stream a real-time data stream*", (2) "*starting to read a second data stream from the optical media concurrently with the first data stream at time t_y ($t_x \neq t_y$), while the first data stream is being read*", and (3) "*transferring the first data stream to a first buffer for temporary storage at a sufficient rate to allow transfer of the second data stream without causing starvation of the first data stream.*"

In the rejection of Claim 25, the Office Action admits that Ohta does not disclose at least $t_x \neq t_y$, as recited in Claim 25. The Office Action then takes Official Notice that "users in Ohta can select different starting times for playing back each of the plurality of data streams according to their convenience." Office Action, page 11, first full paragraph.

Based on the above, it seems the Office Action was relying upon the response to arguments section on pages 2-3 as providing documentary evidence of "*starting to read a first data stream from the optical media at time t_x, the first data stream a real-time data stream; starting to read a second data stream from the optical media concurrently with the first data stream at time t_y ($t_x \neq t_y$), while the first data stream is being read*" as recited in Claim 25.

Applicant respectfully disagrees. When an Applicant challenges a factual assertion as not properly Officially Noticed, or as not properly based upon common knowledge, the examiner must support the finding with adequate evidence. See MPEP 2144.03(C). As noted above in Applicant's objection to the Official Notice, Ohta fails to provide documentary evidence for at least these features.

Because the Office Action has failed to provide documentary evidence, and because the Patent Office bears the burden of showing a *prima facie* showing of unpatentability, Claim 25 is patentable.

Although Claim 25 was patentable, in the interests of furthering prosecution, Applicant has amended Claim 25 to include the additional feature of "transferring the first data stream to a first buffer for temporary storage at a sufficient rate to allow transfer of the second data stream without causing starvation of the first data stream." Therefore, Claim 25 is patentable for at least this additional reason.

None of the Examiner Applied Art, alone or in any reasonable combination, cures these deficiencies. Accordingly, the rejection of Claim 25 should be withdrawn.

9. Rejection of Independent Claim 51 under 35 USC 103(a)

Claim 51 stands rejected under 35 USC 103(a) as being obvious over Ohta in view of Kitamura in view of Official Notice.

Independent Claim 51 recites at least one computer readable storage medium having stored thereon the computer executable components including (1) "*a component that provides for concurrently reading a non-real-time data stream from optical media starting at time ty and reading a real-time data stream from the optical media starting at time* t_x*, wherein* $t+ \neq t_y$."

In the rejection of Claim 52, the Office Action states in its entirety, "Claim 52 is rejected for the same reason as discussed in claim 50 above". In the rejection of Claim 50, the Office Action admits that neither Ohta nor Kitamura disclose at least $t_x \neq t_y$, as recited in Claim 51. Office Action, page 18, second paragraph. The Office Action then takes Official Notice that "users in Ohta can select different starting times for playing back each of the plurality of data streams according to their convenience." Office Action, page 18, third paragraph.

Based on the above, it seems the Office Action was relying upon the response to arguments section on pages 2-3 as providing documentary evidence of "*a component that provides for concurrently reading a non-real-time data stream from optical media starting at time ty and reading a real-time data stream from the optical media starting at time tx, wherein* $t+ \neq ty$" as recited in Claim 51.

Applicant respectfully disagrees. When an Applicant challenges a factual assertion as not properly Officially Noticed, or as not properly based upon common knowledge, the examiner must support the finding with adequate evidence. See MPEP 2144.03(C). As noted above in Applicant's objection to the Official Notice, Ohta fails to provide documentary evidence for at least these features.

Because the Office Action has failed to provide documentary evidence, and because the Patent Office bears the burden of showing a *prima facie* showing of unpatentability, Claim 51 is patentable.

None of the Examiner Applied Art, alone or in any reasonable combination, cures these deficiencies. Accordingly, the rejection of Claim 51 should be withdrawn.

10. Rejection of claim 41 under 35 USC § 103(a)

Claim 41 stands rejected under 35 USC 103(a) as being obvious over Ohta in view of King.

Dependent Claim 41 depends from Claim 37, which depends from Claim 25, and thus includes each and every feature recited in Claims 25 and 37. In independent form, Claim 41 thus recites a method of utilizing optical media, the method comprising (1) "*starting to read a first data stream from the optical media at time t_x, the first data stream a real-time data stream*", (2) "*starting to read a second data stream from the optical media concurrently with the first data stream at time t_y ($t_x \neq t_y$), while the first data stream is being read*", (3) "*transferring the first data stream to a first buffer for temporary storage at a*

sufficient rate to allow transfer of the second data stream without causing starvation of the first data stream," (4) "*determining seek times across the optical media to facilitate ascertaining an optical hardware device's ability to seek on the optical media, the optical hardware device employed to run the optical media*", the determining seek times comprising (4a) "*dividing the optical media into a number of sections, the number of sections comprising at least a first section and at least a second section, such that an internal cache of the optical hardware device does not pre-cache data from the second section when told to start reading from the first section*" and (4b) "*for all ordered pairs of sections comprising any two sections, ensuring that the optical hardware device is reading from the first section and then causing the optical hardware device to seek to the second section to gain characteristic seek performances across the optical media*", the ensuring that the optical hardware device is reading from the first section comprising (4c) "*using a READ10 command with a force unit access (FUA) bit set to one*".

In the rejection of Claim 25, the Office Action admits that "Ohta does not explicitly disclose t_x is not equal to t_y." Office Action, page 11. This deficiency is not claimed to be corrected by the application of King. Therefore, the rejection of Claim 41 fails to address each and every element of Claim 41.

None of the remaining Examiner Applied Art, alone or in any reasonable combination, cures the above deficiencies. Accordingly, the rejection of Claim 41 should be withdrawn for at least these additional reasons.

11. Rejection of claim 42 under 35 USC § 103(a)

Claim 42 stands rejected under 35 USC 103(a) as being obvious over Ohta in view of King.

Dependent Claim 42 depends from Claim 37, which depends from Claim 25, and thus includes each and every feature recited in Claims 25 and 37. In independent form, Claim 42 thus recites a method of utilizing optical media, the method comprising (1) "*starting to read a first data stream from the optical media at time t_x, the first data stream a real-time data stream*", (2) "*starting to read a second data stream from the optical media concurrently with the first data stream at time t_y ($t_x \neq t_y$), while the first data stream is being read*", (3) "*transferring the first data stream to a first buffer for temporary storage at a sufficient rate to allow transfer of the second data stream without causing starvation of the first data stream,*" (4) "*determining seek times across the optical media to facilitate ascertaining an optical hardware device's ability to seek on the optical media, the optical hardware device employed to run the optical media*", the determining seek times comprising (4a) "*dividing the optical media into a number of sections, the number of sections comprising at least a first section and at least a second section, such that an internal cache of the optical hardware device does not pre-cache data from the second section when told to start reading from the first section*" and (4b) "*for all ordered pairs of sections comprising any two sections, ensuring that the optical hardware device is reading from the first section and then causing the optical hardware device to seek to the second section to gain characteristic seek performances across the*

optical media", the causing the optical hardware device to seek to the second section comprising (4c) "*using a READ10 command with a force unit access (FUA) bit set to one*".

In the rejection of Claim 25, the Office Action admits that "Ohta does not explicitly disclose t_x is not equal to t_y." Office Action, page 11. This deficiency is not claimed to be corrected by the application of King. Therefore, the rejection of Claim 42 fails to address **each and every element** of Claim 42.

None of the remaining Examiner Applied Art, alone or in any reasonable combination, cures the above deficiencies. Accordingly, the rejection of Claim 41 should be withdrawn for at least these additional reasons.

12. New Independent Claims 72-74

Applicant presents new independent claims 72-74. For at least the reasons provided above, Applicant respectfully submits that none of the Examiner Applied Art, alone or in any reasonable combination, teaches or suggests each of the features recited in any of these claims. Accordingly, Applicant submits that claims 72-74 are patentable, and requests allowance of the same.

13. Dependent Claims Generally

Each of the dependent claims rely, directly or indirectly, upon one of the above independent claims. Accordingly, for at least the reasons provided above with respect to the corresponding independent claims, each of the dependent claims are also patentable.

14. Canceled Claims

To speed the furtherance of prosecution, Applicant has canceled numerous claims, rendering the rejections thereof moot.

15. Applicant note regarding claims 72-74

Claims 72-74 are each independent claims. The MPEP indicates that, for fee purposes, these claims are treated as dependent claims, "For purposes of determining the fee due ... a claim will be treated as dependent if it contains reference to ... other claims". See MPEP 607 § III.

16. CONCLUSION

Accordingly, in view of the above amendment and remarks it is submitted that the claims are patentably distinct over the prior art and that all the rejections to the claims have been overcome. Reconsideration and reexamination of the above Application is requested. Based on the foregoing, Applicants respectfully requests that the pending claims be allowed, and that a timely Notice of Allowance be issued in this case. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee that is not covered by an enclosed check please charge any deficiency to Deposit Account No. 50-0463.

Respectfully submitted,

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